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CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society Of America

Vol. XVI OCTOBER, 1944 No. 10

FIG. 123. A 14-in. *Astrophytum ornatum* var. *mirbelii* flowering with *A. myriostigma* var. *vera* in the garden of Scott E. Haselton.

CACTUS AND SUCCULENT JOURNAL

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Vol. XVI OCTOBER, 1944 No. 10

The Astrophytum Group.....Jay E. Gilkey 143
Notes on Haworthias.....J. R. Brown 151
Cereusly Speaking.....John E. C. Rodgers 153
Affiliate Notes.....Chas. A. Place 154
Spine Chats.....Ladislaus Cutak 155

June 21, Auckland, New Zealand. "Our winter is upon us and so far we are not getting it cold except for a few days when a gale of wind came from the south-west, clean off snow clad mountains and glaciers—but it rains, rains, rains. Everywhere is a quagmire. If I try to pull up any of the numerous weeds, lumps of soggy soil come up, too! I work a half hour or so, then down comes another deluge. I rush for the glass house where I remain for an hour and then all paths, weeds, etc., are dripping with water. A gardener's life—especially a cactus gardener —is not a happy one just now."

MRS. M. WATERMAN.

August 19, Belair, So. Australia. "About a month ago we had the severest frosts in the history of Belair. It was the first time our back lawn was white, and this happened on about six consecutive mornings. Still the plants survived, with the exception of several Euphorbias. I am trying to reclassify my collection according to Britton & Rose and the latest book. By the way Mr. Dandridge has also obtained Marshall & Bock's book, and he is also reclassifying his collection. Any doubtful plants are being put aside until we can get the time to count the ribs, spines, etc., to decide its name." CLIVE A. L. WILLIAMS.

August 12, Surrey, England. "Cactus culture in this area is practically at a standstill and I have lost many plants from neglect or enemy action, but am hoping for brighter days very soon. During the flowering season my greenhouse will once again be ablaze with color." H. N. MINCHIN.

August 8, Victoria, Australia. "This winter we put up an all-time record for frost—something like yours in California in 1939. Have had a few pleasant surprises with tender plants and some unpleasant ones with "hardy" ones. At the end of the winter I will write you some details. I would like to contact some American grower to whom I could send seeds of our unknown plants with the view of having them named. With many sorts I could send a fair supply which would help square the account. RALPH W. FIELD.

THE CULTIVATION OF SUCCULENTS

By H. JACOBSEN

Keeper of the Botanical Gardens, Kiel
Translated by VERA HIGGINS, M.A.

The chief genera are here dealt with in a clear and comprehensive manner. The book includes chapters on Imported Plants, Seed Production, Propagation by Seed, Vegetative Propagation, Diseases and Pests, and Labelling, and the author's aim is to supply growers in all parts of the world with good, practical advice and helpful suggestions. Illustrated. $1.65 postpaid. Foreign 15c additional.

SCOTT E. HASELTON

Box 101 Pasadena 16, Calif.

Sept. 10, Middleboro, Mass. "Was hot and dry here in August and temperature went to 122 and the cactus went to town for me. From the 4th to 28th of August I had at least one cactus in bloom for me every day, some days three different kinds were in bloom at once. Had up to three blossoms open on a plant at once. Today *Thelococtus bicolor* is in bloom along with the *Ceropegia woodii* vine, which has not been without a bloom since it started to blossom July 3rd. What a Succulent!" RUFUS BLAIR.

ANNUAL MEETING

The Cactus and Succulent Society of America, Inc., will hold its annual meeting October 15th, 1944, at 3 P. M., at the home and garden of Mr. Wm. Taylor Marshall, 327 N. Ave. 61, Los Angeles. All members and your friends are most cordially invited. The nominating committee will submit a list of officers for the coming year and nominations may be made from the floor. Bring a supper basket lunch, table and stools.

Later in the evening a real treat is promised us. Kodachrome slides and lecture by Mr. Marshall. It is our big get-together day of the year. There will be no other notice of this meeting, so mark your calendar now. Let's all try and be there to enjoy one of our outstanding cactus gardens of Southern California.

MAYBELLE PLACE, *President.*

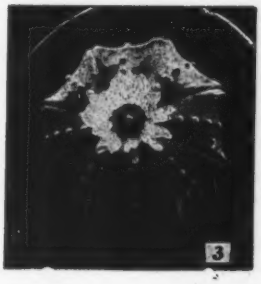

FIG. 124. *Astrophytum asterias.*

The Astrophytum Group

By JAY E. GILKEY

EDITOR'S NOTE: This article deals with the Astrophytums generally found in collections. It is not intended to be scientific and the names are those being distributed with the plants. Most of the information was furnished to Mr. Gilkey by the late Dr. Lowry of Laredo, Texas. This genus is ideal for the "splitters" who may some day count the scales and give us many more varieties! Too many plants have been distributed under unpublished names (Mammillarias especially) and before many months we hope to list these names, see that they are properly recorded or placed in a "black list." Please start listing your plants that you have been unable to trace. S. E. H.

Of all the different kinds of cacti that have been found I do not believe there is any group more interesting than the Astrophytums. They are nice, clean plants and will stand a lot of abuse that many plants will not endure. With a little care they will respond with nice growth and at blooming time they will show their appreciation with beautiful flowers.

In writing this article, my main purpose is to discuss many of the forms so that it will not be necessary to look in many books to find what you want. There are a number of variations so near alike that it is difficult to tell the difference between them. I will start with *Astrophytum asterias* of which there is only one known type. I have one that is six inches across and is the largest I have ever seen. I also have a crest of the same plant. It is sometimes called "Sea Urchin," and has been mistaken for the Peyote (*Lophophora williamsii*).

1. ASTROPHYTUM ASTERIAS

A. asterias is spherical in shape and usually has eight ribs with little tufts of wool or hair

FIG. 125. *Astrophytum asterias* always has 8 rounded segments, rows of woolly areoles between, never any spines. This plant is often confused with *Lophophora williamsii* (right, Fig. 126).

on each rib. The flowers are about two inches in diameter and are yellow, shading to red in the center. This is the only one of the genus which extends its area of distribution into the United States, and then only for a few square miles in the extreme lower part of Texas. Otherwise, it is probably limited to the Mexican State of Tamaulipas, although it may possibly exist in some sections of the neighboring state of Nuevo León. This plant was introduced in Europe by Baron von Karwinsky of Munich in the year 1843. Dr. Zuccarini, a professor of botany, also of Munich, described it two years later. It was then lost for eighty years and was rediscovered about fifteen years ago. The name is from the Greek language referring to its star-like shape.

2. ASTROPHYTUM CAPRICORNE

A. capricorne is an outstanding plant as the spine structure is quite different than in the rest of the family. They are twisted and contorted in all shapes. The name *capricorne* was first used by a German botanist who described it in 1851. The word capricorne is taken from Caper (goat) and Cornu (horn) or goat horn. It has five variations:

1. *A. capricorne* var. *major* is found southward in the first mountain range south of the Texas-Mexico border. This variety is the largest of the species and is very variable in its spine formation, some plants being almost spineless, while others bear from six to ten long, twisted, flattened blackish bristles from each areole. The flower is large, bright yellow with a brilliant

FIG. 127. *Astrophytum capricorne* Dietr. is at first globular, later elongated with 8 sharp, deep ribs, more or less studded with white scales. Shown above is a cultivated plant.

red center and of striking beauty.

2. Further south is found *A. capricorne* var. *minor,* which is smaller and more heavily armed but with the same flattened dark harmless spines. The flower differs from var. *major*

FIG. 128. *Astrophytum capricorne*
A young plant.

only in size which is smaller. In the high barren mountains to the west may be found three other varieties.

3. *A. capricorne* var. *crassispinum,* bears fifteen to twenty large, coarse, flattened spines at each areole.

4. *A. capricorne* var. *senilis* carries more spines than var. *crassispinum* but these are slender, terete bristle, two to three and one-half inches long and a mahogany brown in color.

5. *A. capricorne* var. *aurea** has slender terete bristles two to three and one-half inches long and mahogany color. The new bristles are a bright gold which darken with age. The flowers

FIG. 129. *Astrophytum capricorne* var. *major.*

FIG. 130. *Astrophytum capricorne* var. *senilis* Fric.

of all varieties are similar in color and shape and the fruit and seeds are alike, but the bodies of var. *senilis* and var. *aurea* are entirely lacking in the white-felted dottings so characteristic of the genus.

3. ASTROPHYTUM MYRIOSTIGMA

A. myriostigma and its variations are very interesting. In 1837, Galleotti discovered a species of cacti on the hills of Hacienda de San

FIG. 131. *Astrophytum myriostigma* var. *cohuilensis* in its native home in Mexico.

*To show the confusion of names: M. & B. list var. *aurea,* Mrs. Wright imported a plant as var. *aureus,* and Mrs. Bakkers lists the plant as var. *aureum.* If you don't know Latin, pick your own name.

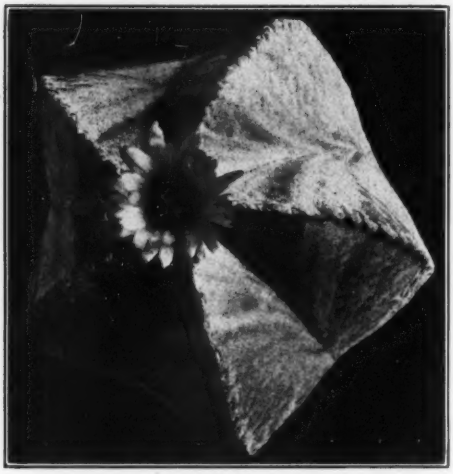

FIG. 132. Bishop's Cap, *Astrophytum myriostigma* var. *coahuilensis*.

FIG. 133. The Bishop's Cap is often confused with a succulent, *Euphorbia obesa*.

Lazaro, northeast of San Luis Potosi, Mexico. He called it *Cereus callicoche* (from the Greek words meaning pretty and shell, or sea star). Later on it was classified as an *Echinocereus*, but owing to the peculiar shape, the position of the spine cushions, and absence of spines led to the conclusion that it was not in the proper classification. It was finally determined by Lemaire as the type species of *Astrophytum*. It was first cultivated by Francois Vandermaelen in Brussels and bloomed for the first time for Jas Courant, of Harve. The six varieties are:

1. *A. myriostigma* var. *coahuilensis* is found in the mountains of the state of Coahuila, and is the gray form of the "Bishop's cap." This variety is completely covered with the white dots or scales, and resembles at a short distance the white lime stone rocks in which it grows. It is globular or short cylindric, ribs four to nine but usually five, broad acute so densely covered with the white scales that the plant is completely hidden. Spineless except in very young seedlings. Flowers are yellow with a deep red center from one and one-half to two and

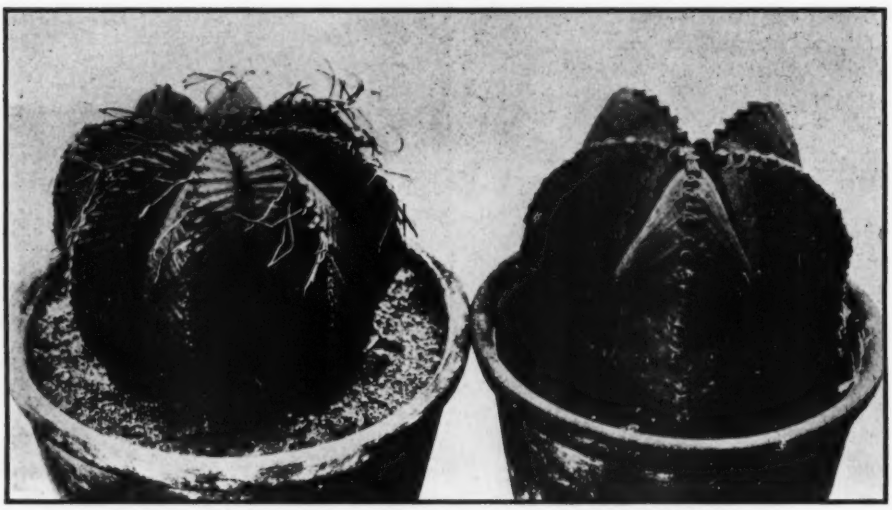

FIG. 134. *Astrophytum myriostigma* is often mistaken for *Euphorbia meloformis*.

one-half inch wide. Fruit round, green and occasionally reddish at base. The globular fruit dehisces through a basal pore. The seeds are dark brown.

2. *A. myriostigma* var. *potosina* comes from the state of San Luis Potosi. It is of a greenish color and usually has five ribs. The flowers are yellow and have no red center as in var. *coahuilensis*. The flower is smaller and the plant is also much lower in form. It is flattened, globular and the diameter is usually greater than its height. It is less thickly covered with white scales than the previous variety. Old plants often lacking scales except near growing center. Fruit slightly oblong woolly and dehiscent through four or five radiating slits at top.

3. *A. myriostigma* var. *tamaulipensis* comes from the state of Tamaulipas to the east of Nuevo León and San Luis Potosi. It also has five ribs and is rather tall having a greenish color. Flowers are smaller than *potosina* and *coahuilensis* and in appearance and characteristics it is an intermediate between them. It is not so completely covered with the white or gray dots as var. *coahuilensis* but more so than var. *potosina*. It also has yellow flowers and the seeds are dispersed through radiating slits which we find in the var. *potosina*. It is globular, greener and with more approximate areoles than var. *potosina*.

4. *A. myriostigma* var. *quadricostata* (or var. *tetragona*) is not a true variety but a freak form that may and does occur in a small proportion of these plants. Individual plants with a greater number of ribs than the usual five are not infrequent and very old plants generally develop

FIG. 135. *Astrophytum myriostigma* var. *quadricostata*

several additional ribs. Off-shoots from damaged plants may show heads with from four to seven or eight ribs. The var. *quadricostata* is very interesting due to the fact it has only four ribs. It is found in the state of Tamaulipas and is greenish in color and grows rather tall like the five ribbed var. *coahuilensis* and var. *tamaulipensis*. It has the smallest flowers which are yellow minus the red center. Some dealers list *A. tetragona* and some *A. quadricostata* but I

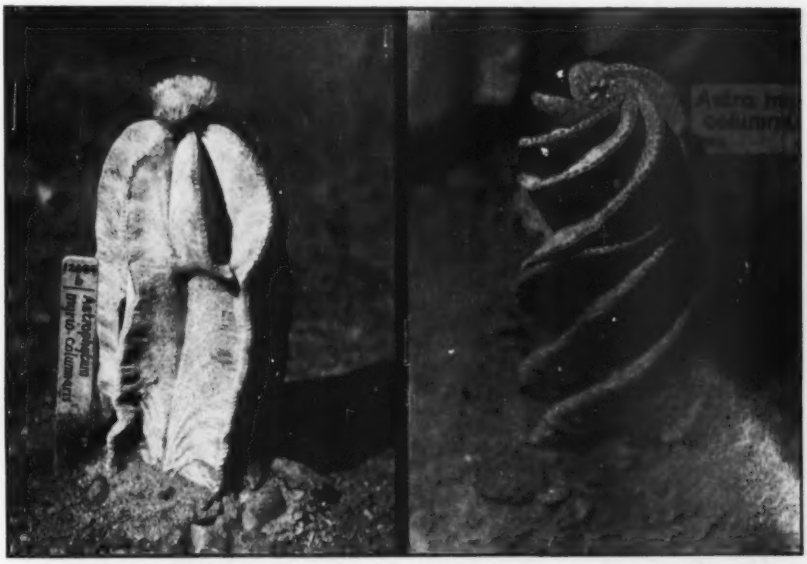

FIG. 136. Your *Astrophytum* may have five ribs to-day, perhaps six tomorrow (Left). FIG. 137. (Right) You may call it *A. myriostigma* var. *columnaris* var. *espiralis* if you enjoy names. Schelle at one time listed 61 hybrids or forms of *Astrophytum*.

FIG. 138. *Astrophytum myriostigma* var. *columnaris*.

FIG. 139. A cross by Herman Tobusch showing the larger flower usually found in hybrids.

cannot see any difference between the two.

5. *A. myriostigma* var. *columnaris* (or var. *tulensis*) is columnar and usually conical at the tip. Ribs from seven to nine. Flowers small and pale yellow. Fruit dehiscent through radiating slits at top. The plant is heavily coated with gray dottings. In age it tends to take on a distinctly columnar form and to develop from three to five supernumerary ribs. Bears a smaller and much paler flower than other varieties of the species. Small plants under four or five inches high of all these varieties are very similar, but in better developed specimens the varietal differences are very plain.

6. Then we have *A. myriostigma* var. *nuda*. These plants are of the variation *potosina* with all the scales lacking or nearly so. This variation is probably due to lack of sunlight as

FIG. 140. A group of Astrophytums grown from seed by Herman Tobusch, Illinois.

FIG. 141. Young plant of *Astrophytum capricorne*. FIG. 142. RIGHT: *Astrophytum myriostigma* var. *vera* is a good pot plant and flowers profusely. The fruit is usually devoured by ants before it ripens.

naked specimens soon develop scales when transplanted to an open bed. Flowers are yellow. Has five ribs and is usually depressed like var. *potosina*. From what I can find out and from seeing my own plants bloom, *A. myriostigma* var. *coahuilensis* is the only plant that has the red center in the flower like *A. capricorne*. The varieties of *A. myriostigma* (*potosina, coahuilensis* and *tamaulipensis*) may be found with six to ten ribs. In Dr. Houghton's "The Cactus Book," he shows where sand is used with the *asterias* and *myriostigma* and lime used with *capricorne* and *ornatum*. I use the same mixture for all and do not see any difference in growth of plants.

4. ASTROPHYTUM ORNATUM

A. ornatum is the most southerly in habitat of the genus, and exists in three fairly well defined varieties, although there are eleven known variations. In shape of body and form and number of libs and number and shape of spines the three varieties are practically the same, but the type, with brownish spines, is thickly covered with white felted dots, usually arranged in diagonal rows with alternating patches of the

FIG. 143. *Astrophytum ornatum* has stiff spines and young plants are nearly covered with white dots.

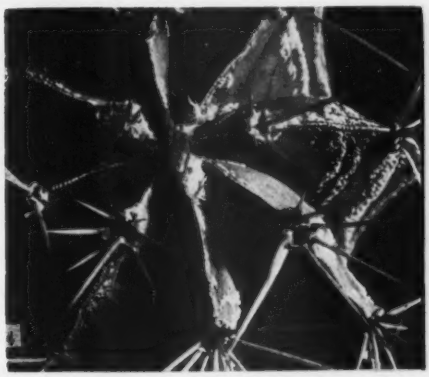

FIG. 144. In older plants, especially *A. ornatum* var. *glabrescens*, the white dots are practically lacking.

FIG. 145. *Astrophytum ornatum* var. *mirbelii* K. Sch. 18 in. tall.

green plant body showing in between. From what I can find out *A. ornatum* was first brought to public notice by De Candolle of Paris in 1828. The three varieties are:

1. *A. ornatum* var. *mirbelii* is, in small plants, very similar to the species but the spines are a clear golden yellow. It reaches a height of thirty-six inches or more with areoles close together and the yellow spine clusters forming a continuous line from top to base of each of the eight ribs. The white dottings exist only as a few irregular lines near the growing center. In this form it more closely resembles a columnar *Cereus* than an *Astrophytum*.

2. *A. ornatum* var. *glabrescens* may reach a height of 18 to 24 inches, but the woolly or sometimes naked areoles remain distant. In older plants the differences are much more marked, as the white dotting is almost completely lacking.

3. *A. ornatum* var. *glaucens** is the smallest of the varieties of this species, seldom exceeding 12 inches and with the white dots almost entirely lacking. The plant body is rather dark green and the spines a light brown. Flowers of the above three varieties are a pale yellow and the fruit dehisces through radiating slits in the upper half. *A. ornatum* is the only *Astrophytum* with pungent spines.

*B. & R. list *glabrescens* Web. as a synonym of *ornatum* because it has never been described. *A. ornatum* var. *glaucens* is not recorded.

FIG. 146. Spiral form of var. *mirbelii*.

CHANGE IN NAME

My friend, Mr. Kurt Knebel, named one of his best Epiphyllum creations *Frau H. M. Wegener*. I hereby request those few persons possessing a specimen to change the name to *Beautie Wegener*, her correct name. I likewise notify the public, that I have sold my collection.

H. M. WEGENER, Los Angeles

MY FRIEND

When one aspires to literary talent it is deflating indeed when your friend, R. W. Kelly, remarks, "It must have been hot when you passed through Tucson if you saw *Opuntia vestita*. I was under the impression that this plant was native to So. America." We really knew better—so please make the correction on page 128 to read *O. versicolor*.

SUCCULENT PLANTS OF NEW AND OLD WORLD DESERTS

This 64 page booklet written by E. J. Alexander of the New York Botanical Garden contains 102 excellent pictures of cacti and the other succulents that you should have in your collection. The descriptions are very readable and every amateur should have this book. Order now while available, 55 cents postpaid.

BOX 101, PASADENA, CALIF.

KEY TO ASTROPHYTUS FROM "CACTACEAE" M. & B.

Based on information furnished to Dr. A. D. Houghton by Arturo Moeller in 1930.

No key has ever been compiled to include all of the forms on which no two individuals will agree.

Plants spiniferous:
- Ribs prominent:
  - Spines contorted, robust . . . . . *A. capricorne*
  - Spines bristle-like:
    - Spines ashy-gray . . . . . *A. capricorne* var. *senilis*
    - Spines in center of plant, yellow, later gray *A. capricorne* var. *aurea*
  - Spines straight, porrect:
    - Plant globose; spines dull . . . . . *A. ornatum*
    - Plant cylindrical in age; spines yellow . *A. ornatum* var. *Mirbelii*

Plants spineless:
- Ribs rounded . . . . . *A. asterias*
- Ribs prominent:
  - Flower with a red center . . . . . *A. myriostigma* var. *coahuilensis*
  - Flower all yellow:
    - Tall columnar plants . . . . . *A. myriostigma* var. *columnaris*
    - Not tall columnar plants:
      - Plants always four ribbed . . . . . *A. myriostigma* var. *quadricostata*
      - Plants mostly five ribbed:
        - Plants spotted with white . . . . *A. myriostigma vera*
        - Plants not white spotted:
          - Plants not depressed globose . *A. myriostigma* var. *tamaulipensis*
          - Plants depressed globose:
            - Flowers small . . . . *A. myriostigma* var. *potosina*
            - Flowers large . . . . *A. myriostigma* var. *nuda*

Notes on Haworthias

By J. R. Brown

Haworthia altilinea, Haw. var. **typica,** Poelln. in Repert. Sp. Nov. XLV (1938) 167. *Haworthia altilinea* Haw. in Phil. Mag. (1824) 301; Bak. in Journ. Linn. Soc. XVIII (1880) 209; Berger in Pflanzenr. IV. 38 (1908) 104; Poelln. in Repert. Sp. Nov. XLI (1937) 207.—*Aloe altilinea,* Salm, Monogr. (1836-63) sect. 11, fig. 3.

Plant 8-11 cm. in diam. proliferous from the axils of the older leaves.

Leaves 3-6 cm. long, 1-2 cm. wide, spreading-incurving, oblanceolate, somewhat thicker in the upper part, acuminate, terminating in a slender bristle 5-10 mm. long, pale green, face of leaf with a lightly raised middle line and the back lightly keeled, apex of leaf pellucid and with 5-7 or more green, indistinctly uniting lines, the lower margins and the upper part of keel with minute teeth.

Peduncle slender, 30 cm. and more tall, including the raceme; bracts ovate-deltoid, 5 mm. long, pedicels 3-4 mm. long; perianth 12-15 mm. long, the obclavate tube white, green lined, the segments short, obtuse, white with green keels, the lower more revolute, the upper more erect.

Introduced into cultivation about 1820.

Type locality unknown. Recorded from Uitenhage Div., near the Zwartkops River; Stockenstrom Div., stony ridges near Seymour; Red-

house, Uitenhage Distr.; Grahamstown; Cathcart; Zwartkops Mtns., Prince Albert Distr.; Hankey near Port Elizabeth; Longrove Plantation near Port Elizabeth.

Flowering in So. California during May and June.

The following key is approximately that given by Poelln. l.c. 170.

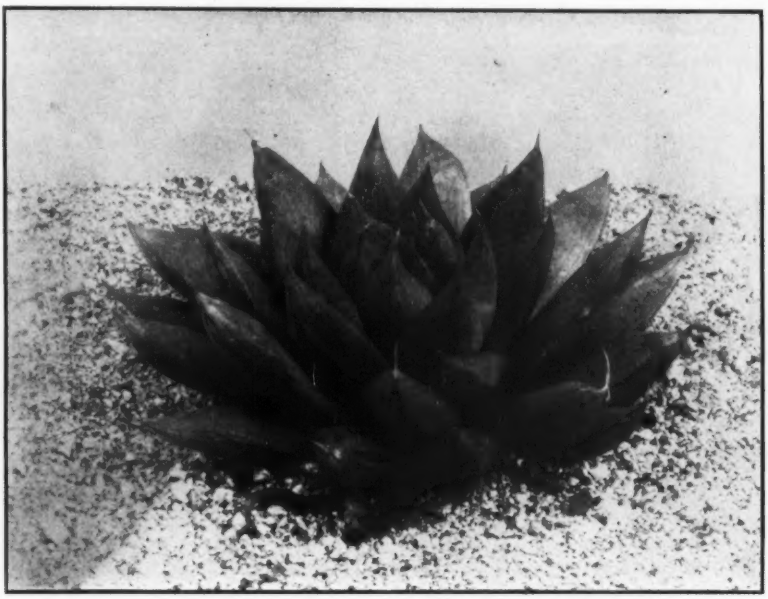

FIG. 147. *Haworthia altilinea*, Haw. var. *typica* Poelln, nat size.

Key to the forms of *Haworthia altilinea*

1.	Leaves yellow-green or yellowish green:	2.
—	Leaves without the yellow tinge:	3.
2.	Leaf margins and keel with distinct teeth:	var. *setulifera*
—	Leaf margins and keel usually entire:	var. *Morrisiae*
3.	The end bristle minute:	var. *Morrisiae* forma *subglauca*
—	The end bristle longer:	4.
4.	Margins and keel entirely or almost entirely smooth:	var. *limpida*
—	Margins and keel with small teeth or only the keel smooth:	5.
5.	Teeth 2 mm. long or somewhat longer:	8.
—	Teeth much shorter:	6.
6.	Keel smooth:	var. *mucronata*
—	Keel, at least near the leaf tip, toothed:	7.
7.	Teeth on margins and keel more numerous, larger. End bristle to 3 mm. long. Pedicels 1 mm. long. Segments almost as long as the tube:	var. *denticulata*
—	Teeth on margins and keel less numerous, minute. End bristle 5-10 mm. long. Pedicels 3-4 mm. long. Segments shorter:	var. *typica*
8.	Leaves usually with one keel:	var. *polyphylla*
—	Leaves always doubly keeled:	var. *bicarinata*

Astrophytum—Genus 26, Echinocactanae

Astrophytums are found only in northern Mexico, although M. & B. mention one as being found in Texas. I have not been able to find which one. "*A. asterias, ornatum,* and *myriostigma* are able to resist light frosts. Loose but rich soil with added calcium is recommended with liberal water in warm weather if plants are well-rooted." See Moeller's key to varieties published in the JOURNAL, Vol. 1, page 157. My own collection is almost complete as far as Moeller goes but I also find some which I have bought from dealers that are not mentioned. The campanulate flowers are all produced near the top of the plant. Fruit is scaley with wool in axils. Seeds dark brown. Name means "Star plant."

September 1. Astrophytum asterias bloomed. Has had five blooms. No fruit set. Hybrid *A. asterias* x *capricorne* also bloomed. Bought from hybridizer Eugene Ziegler in 1934 when it was one inch tall and one inch in diameter. Resembles *capricorne* in sharp ribs and *asterias* in height, lack of spines, and reddish tint of bloom near center. Repotted two plants in July in porous pots two inches larger than plant. Used ½ sandy loam, ¼ coarse sand and ¼ leaf mold with a liberal admixture of crushed limestone screened through ½ inch mesh. Did not disturb roots too much but examined ends for nematodes and decay signs. *A. asterias* has no varieties. Popularly called "Sea urchin."

September 3. A. capricorne, with long twisted papery spines, grows wild in limestone and slate formation along with *Lophophora williamsii* and *Ariocarpus furfuraceous.* Did not cease growing when repotted in July in larger pot. Took hint and crushed some of my old roof slates. Used dust and coarser pieces on surface of my regular soil in pots. Two buds developing. Usually blooms first in late March then again in September. Rests from late November until March. Although books mention Astrophytums like full sun I protect mine from full sun at noon during June, July and August. Buds develop and delicate blooms do not burn or fade. Give Astrophytums full sun outdoors during September and October. I have come to the conclusion that sunshine, fresh air, and limited waterings will decide what blooms I'll get the following year.

September 7. A. myriostigma var. *columnaris* has fourth bloom. Bloomed first time this year, May 19. Six inches tall and 3½ inches in diameter. Bloom only slightly tinted at the center with orange-red. Bought plant at a local greenhouse in 1933 when it was a "pup." Depotted it then, as I still do when I buy a plant from local dealers. Examine plants for broken roots. If not found—repot, otherwise cut back, dust ends with wettable sulphur and plant in moist soil. Greenhouse soil is usually heavier in these parts than I need in my greenhouse. My losses have been less since I depot from greenhouse soil and repot in my ½, ¼, ¼ plus lime type. Have two two-inch veriety *quadricostata* (4 sided). *Myriostigma* has six varieties in all. The Bishop's Cap is undoubtedly the most popular cactus grown with *asterias* a close second.

September 10. A. ornatum, 4 inches in diameter and 3 inches high, has a bud. First one blasted in May because of lean soil. Had been in too small pot with not enough nourishment. Repotted in larger pot of soil on limey-side without disturbing ball of soil. New bud started and has kept on growing. True species, globose with dull grayish spines. Bloomed last year also. Lemon yellow. Plant 3 in. in diameter. Variety *mirbelii* with clusters of yellow radiating spines is now 7 inches tall and 5 inches in diameter (see Cereusly Speaking, Jan. 3, 1942). Have also variety *espiralis* which has its ribs in spirals. Ornamental only so far.

September 13. A. capricorne variety covered with numerous long gray spines. New spines yellow but no white markings on plant. Bought at McCrory's plant stand in Cleveland, Ohio. Grows rapidly. In loose soil I use for Astrophytums. Sets on damp sand in tray. Watered from bottom during winter. Likes partial shade. Hard to get. Much sought after by collectors. Hybrid? I doubt it as it is true to form other than in lack of white markings (see Plate XXI B. & R., Volume III). Dealers here abouts call it "*mirabilis.*"

September 17. A ornatum opened large lemon yellow bloom in bright sunshine. Collectors in this section claim it's a shy bloomer. Bough a two year old seedling from Eugene Ziegler in 1932. Bloomed first time last year in May. Slow grower. I refuse to use chemicals or strong fertilizers to speed up growth on columnar and ballophyte cacti. Plant is compact with definite white scales and dark green cuticle. Base of plant and edge of ribs covered with walnut brown protective tissue. Likes plenty of moisture while growing. Water sparingly during rest period.

September 20. Checked five-sided *A. myriostigma* var. *vera.* Depressed, globose and white spotted patches (scales). Grows in loose limey soil with slate dust top dressing. (Slate is compressed silt, clay, etc., water laid.) Holds moisture longer than most crushed rocks. Large 3½ inch *Myriostigma* not depressed in center dome-shaped, ribs more rounded—could be variety *tamaulipensis* except for thickly clustered white scales. *A. myriostigma* var. *coahuilensis* was bought from Eugene Ziegler. Grown from seed collected by Ferdinand Schmoll. Hasn't set any buds this year but had a bloom with red center like *asterias* last June.

September 23. Scars on two *A. asterias* from sunburn in early spring three years ago are disappearing under plants. Taught me to watch Astrophytums even if scales are supposed to protect some of them from early spring sunlight. First *A. asterias* I bought (a 4-inch specimen) died after 4 years in my greenhouse, soil sifted out through drainage hole and left plant roots exposed. Other growers find lack of rich well drained soil, or soils which have been bleached out by overwatering are dangerous to health. Dry rot under plant causing loss of roots is usually too far advanced when found to save plant. "De-pot if not growing and check" is my motto. I use a half inch layer of crushed limestone between body of plant and top of regular soil for my two *A. asterias.*

September 26. A capricorne var. *senilis.* A seedling bought in 1934 from E. Ziegler has long twisted gray spines on the newer growth only. Sheds its lower spines, after the plant hardens, for self-protection from enemies. Slow grower. Begins center growth just after its first bloom appears in March. Has black tips on outer perianth segments of tube. One of my favorite flowers.

September 30. Set all of my Astrophytums on the back porch where they'll dry out before winter storing in greenhouse. The growth on the 15 species and varieties since I repotted them in July has encouraged me to delve into other groups' needs when spring comes again.

AFFILIATE NOTES

Well, October is as good a month as any other for an alibi. There are several letters that I should have answered but among the various other things I have to do to facilitate the settling down in our new environment, a lath house must be built and I am the engineer, grader, carpenter, painter, in fact the whole crew as mechanics or laborers are almost an impossibility in this section. So if I have neglected any one I shall try to make my peace, sometime in the near future. C. A. Place,

Mrs. F. S. Fitzpatrick (Sec.-Treas.) writes:

"The Detroit Cacti and Succulent Society is fully launched, and this is a resume of our activities. In January, 1943, there appeared in the Detroit News an article inviting the general public to attend an exhibit of cacti by Dr. Jerome W. Ankley. On the afternoon of the exhibit guests were asked to leave their names if they were interested in forming a Cacti and Succulent Society. Out of this list of names grew the nucleus of the Detroit Cacti and Succulent Society.

"On April 11, 1943, we elected our officers and adopted By-Laws. The Society voted to meet every second Sunday of each month at the Detroit Garden Center in the White House at Belle Isle, Michigan, unless a field trip was arranged.

"We have been privileged to have as speakers at the White House, Mrs. Ruth Mosher Place, Garden Editor of the Detroit News, and Mr. Allemon of Allemon's Florist and Nursery on the subject of 'The Cactus Tribe, and methods, taking and planting cuttings,' respectively. Another meeting was devoted to lantern slides shown by Dr. Jerome W. Ankley and Mr. Norman Ayers.

"Our Field Trips were given over to visits at the C. W. Goode Nursery, Plymouth, Michigan; the Botanical Gardens, University of Michigan, directed by Dr. Elzada Clover, and Ann's Cactus Garden, owned by Mrs. Anne Labadie of Plymouth, Michigan (now Deputy Regional Vice President), who demonstrated the art of grafting cacti. Our current Field Trip will be a trip to the Allemon Florist and Nursery and Lakits greenhouse.

"Instead of disbanding for the summer we accepted the invitation of our fellow member, Mr. Anthony Barone to enjoy his back yard cactus garden and to see the collection of Mr. and Mrs. H. G. Robertson. The last of our summer program was a picnic supper on the shady porch of the Belle Isle White House at which we exchanged plants.

"The highlights of the year were the radio quiz program on WWJ and the Cacti and Succulent Exhibit where members, friends and Commercial Growers exhibited several hundred very fine specimens. Also featured at the show were the collctions sent home from camp by Lt. Richard Scheich, a member, and Pvt. John McCarthey. A terrarium of cactus seedlings was exhibited by 11 year old Joan Scheich.

"Present officers of the Society are: President, Mrs. Lester Adams; Vice-President, Mr. E. W. Comber; Secretary-Treasurer, Mrs. F. S. Fitzpatrick; Directors, Mrs. J. W. Ankley, Mrs. Cyrus Wooster, Mr. John Cochran; Scrapbook custodian, Mrs. W. G. Morris."

This Club should meet with success. It seems to have great planning and management.

Mr. C. L. Wiese (Pres.) writes:

"The Oklahoma Cactus and Succulent Unit at its Aug. 17th meeting, was favored with a treatise on Euphorbiaceae by Mrs. Jas. H. Hyde which was very interesting. She enlightened us on many familiar plants which are not ordinarily associated with that group, as well as a number of local mat-forming weeds that rapidly cover the ground after rains. Mrs. Clyde O. Pulse, who at present is in Texarkana, Ark.-Tex., is also preparing a formula for our lesson books on 'How to make winter plants bloom for Christmas.' "

We will all be very much interested in that formula.

Muriel Colburn (Pres.) writes:

"The Denver Cactus and Succulent Society held a picnic in the garden of Mr. and Mrs. C. D. Hollingsworth on Sunday evening, Aug. 20th. The first picnic the Club has ever held. Mr. and Mrs. Hollingsworth have a lath-house with a large collection of succulents and cacti, which made the picnic more interesting."

I am building a lath-house, but it is no picnic.

Chas. R. Cole (Cor. Sec.) writes:

"This report of the K.I.O. Cactus and Succulent Society is a week late—we held our meeting on the 12th, instead of the 19th, because of travel priorities for our host. They are on their way to Canada now. Roll Call had only 18 of our 29 present, 6 of the 11 had to work, 1 is in service, 2 were under the weather, and the other 2 were too far away, 1 visitor. Report of Nominating Committee accepted for election at Sept. meeting: President, L. Combs; Vice-President, E. Clark; Recording Secretary, Mrs. Goens; Corresponding Secretary, Mrs. Hogue; Treasurer, Mrs. Light; Door Prize, Tyler A. Wehrenberg. Round Robin was on time but meeting was a week ahead of time, so will be reported on next month. Chapter 7, 'Cacti for the Amateur' discussed briefly to make way for other business."

True, your letter was late for last month, but I am glad to have it for this month.

Ladislaus Cutak (Pres.) writes:

"The Henry Shaw Cactus Society will stage its first Cactus Show at the Garden Sept. 30-Oct. 1. We are holding it in conjunction with the annual Fall Flower Show of the St. Louis Horticultural Society and most of our members will enter exhibits.

"These are the classes I have worked up which about takes care of everything. 1. Dish of succulents. 2. Dish of cacti. 3. Desertarium or wardian case. 4. Grafted cactus. 5. Flowering cacti or succulents. 6. Seedling cacti in pans or flats. 7. Living stones—Mesembryanthemum. 8. Euphorbias. 9. Any other succulent. 10. Specialized group of cacti (limited to 5 species in one genus).

"I realize that transportation of material will be a big problem but our members seem to be enthused about the whole thing. If our end of the show is a success and I have no doubt that it will, then I may suggest that we again enter displays in the annual spring Flower Show, giving us two shows a year."

Success to your Show. Wish we had the nerve out here.

Mrs. Ethel Rush (D.R.V.P.) writes:

"The Los Angeles Cactus and Succulent Society met Sept. 3rd, at the home of the Abercrombies, 3813 Broadway, Huntington Park. A fine general discussion of the genus *Haworthia* was held, led by our host who has an excellent collection of these plants. Mr. Abercrombie has been collecting this genus for a number of years and at present has one of the largest collections that I know of."

From the Bulletin of the Heart of America Cactus and Succulent Society. Mary Lee Rose, Editor.

"The officers of the Society have a picture of each one with the name and address, also a picture of those who have articles in the Bulletin. (What a splendid idea and one that is sure to be followed by other Clubs.) August meeting at the home of Mr. and Mrs. Luther Rose; Lecture subject, Opuntias by Mr. Charles Lewis. Sept. meeting at Swope Park; Lecture subject, Mams. by Mr. Bartell.

SPINE CHATS

LADISLAUS CUTAK

At last a vast tranquil and surpassingly colorful stretch of land of more than seven hundred thousand acres, consisting of deserts, canyons and mountains in the Big Bend country of Texas, has been set aside as a national park for posterity. This vast stretch of land will always remain a wild rugged domain and it will continue to slumber in the blazing sunshine as it has in the past. Today it is accessible only by automobile over one all-weather road, but with war restrictions in effect and no improvements contemplated for some time, it will be several years before tourists in great numbers will be able to visit the region and accommodate themselves in style. In 1938 and again in 1939 Gus Bantel and I had the good fortune to visit this isolated region which is typically more Mexican, both as to scenery and plant life, than it is to the United States. In the flats and on the eroded slopes semi-desert vegetation dominates the scene. More than forty species of cacti are said to inhabit the confines of the new park and at least twenty miscellaneous succulents. Of course, the cacti very seldom dominate the scene, because here they do not attain such proportions as in Arizona, but they are conspicuously present among the rocks in huge clusters, such as the Echinocerei make, or in scattered single individuals. The region has not been fully explored and it is quite probable that new species will be found on further collecting trips. A curious pincushion, *Coryphantha ramillosa*, which I described for the first time in the Dec., 1942, CACT. & SUCC. JOURNAL, is the newest cactus coming from that region. Many of the cacti elude the searcher because they are so small and blend so perfectly with their surroundings. The smallest specimens apparently are the Epithelanthas or 'button cacti' while the largest are the arborescent chollas which attain a maximum height of about ten feet in the most ideal locations. Agaves or maguey plants also dominate the inner retreats of the park, as do the Dasylirions and Nolinas, while Yuccas seem to hug the confines or outer sections. Yes, dear reader, you must contemplate a trip to the Big Bend National Park where the grandeur of the Chisos Mountains, the luxuriant desert flora and the lasting romance that prevades the whole domain will enthrall you.

* * *

In one of the small Indian pueblos located in north central New Mexico there is a white school teacher who practices her cactus hobby among the swarthy natives. Her especial favorites are mimicry succulents such as the Pleiospilos, Lithops and Conophytums, but other intriguing groups like the Haworthias and the Euphorbias are not overlooked. She is also fast becoming interested in Mammillarias and Gymnocalyciums for the thorns of most 'pincushion' and 'chin cacti' don't seem to be so treacherous and their blossoms are really beautiful. Her collection at present consists of about 75 varieties, one third of it devoted to the fascinating living stones and pebble plants.

This charming lady recently visited the Missouri Botanical Garden and I had a most delightful time showing her the sights of our institution. Miss Violet Munger has spent most of her life on various farms in Lower Michigan, but for the past five years she has been employed by the Federal Government under Civil Service to teach in the Indian schools of New Mexico. When she taught school in Zuni, Miss Munger helped in organizing a garden club among the Indians and a flower show was staged in September, 1941,—being the first of its kind to be held in an Indian village in that area. Her interest in plants dates back to childhood days, but her enthusiasm for succulents was aroused only in recent years. The first cactus given to her was an *Opuntia* by a grandmother and it produced many blossoms during the years she kept it. Since coming to New Mexico she has studied the few native species which grow there and has been more than thrilled by their bright colored flowers which transform the prickly plants into living objects of dazzling beauty. In 1943, Miss Munger took a trip to California where she visited the Johnson Cactus Gardens and got enthused very much over their lovely collection. This summer she visited many private gardens of our cactus members in Iowa, Illinois and other parts of the Midwest. At present she is teaching in the Santo Domingo Day School, located off the main highway betwen Albuquerque and Santa Fe.

* * *

Recent visitors to Shaw's Garden were Robert Van Sickel of Chicago and Fred L. Way of Marysville, Ohio, both ardent cactophiles and friends of long standing. The former possesses a private greenhouse in his backyard where he grows a miscellaneous assortment of succulents as well as a host of epiphytic bromels,—a group of plants fast becoming favorites with plant fanciers. Bromels, on the whole, lend themselves admirably to a cactus collection and reward the individual with exquisite flowers. Mr. Way does not have a greenhouse but rather a large lathhouse where his succulents enjoy the benefits of fresh breeze, occasional rainfall and subdued sunlight. During the winter months all his plants are transferred to a large enclosed sun-porch located in the front of his castle-like home.

* * *

Dr. David Fairchild, the noted plant explorer who has devoted his life to the fascinating occupation of introducing new uses for alien plants in our country, has recently suggested to me that the fruits of *Cereus peruvianus* or of any other edible Cerei when sliced thin and frozen in the refrigerator become most delicious. He puts sugar and lime juice on them before freezing.

* * *

The ubiquitous Mesquite, which grows in great quantities in our southwestern deserts, has received attention from plant physiologists recently. The plant produces a very useful gum which appears to be the equal of *gum arabic*, a favorite base for various types of skin lotions and also in the manufacture of mucilage, paste, polish and as a glaze in painting. Mesquite is not grown commercially at the present time, but there are many waste acres in the Southwest where it could be grown abundantly.

* * *

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